Finding of No Significant Impact
For Dune Work At
Prime Hook National Wildlife Refuge

The U.S. Fish and Wildlife Service (Service) proposes short-term, interim measures to scrape sand from washover areas in Unit II on Prime Hook National Wildlife Refuge (NWR) to build up approximately 950 feet of dune line south of Fowler Beach on refuge lands, and fill recently created inlets, which are partly on refuge lands and partly on private property (Alternative 2 or the Preferred Alternative). The Proposed Action will also permit the utilization of sediment scraped from refuge lands to repair approximately 2,000 feet of a 3,200-foot-long dune line on private lands connected to the refuge's dune. Overwash sand from refuge land will also be used to fill in other mini-inlet(s) south of Fowler Beach Road. Staging of equipment, sand, and personnel may take place on refuge land during project construction.

In July 2010, the Service published a draft environmental assessment (EA) for dune work at Prime Hook NWR. The draft EA evaluated three alternatives for managing the recently breached dune line, and carefully considered the impacts on the environment and potential contribution to the mission of the National Wildlife Refuge System and refuge purposes and goals. Its appendices provided additional information supporting the assessment. The three alternatives for addressing the dune breach were as follows:

Alternative 1 (No Action): Allow the existing overwashes to continue to build and allow regular tidal flow into Unit II. No dune lines would be repaired.

This alternative would allow overwash and inlet formations to remain intact with the natural dune lines transgressing and forming on their own and re-establishing tidal flow into back-barrier marshes. It is expected that inlets will form and reseal themselves and that washover areas will fluctuate in size and location as the ecosystem self-adjusts in response to various factors and physical processes (e.g., relative sea level rise, recurrent storm history, wave dynamics, local and regional subsidence rates, sediment supply, and legacy effects from human activities). This action would permit natural conversion of a manmade freshwater system back to a brackish or salt marsh system or open water, depending on the specific response of the wetland.

Alternative 2 (Preferred Alternative): Short-term, soft dune line reconstruction using sand scraped on-site.

The Proposed Action would re-establish dune lines on refuge lands utilizing existing sand on the landward side, with the purpose of joining dunes on private lands, and would close recently formed inlets south of Fowler Beach Road. This action would only be conducted if the entire dune line along Unit II, including portions on private land, are slated for reconstruction. The Delaware Department of Natural Resources and Environmental Control (DNREC) will serve as the

cooperating agency and partner of the Service to complete the Proposed Action on both private and Service lands. The Service has been working closely with DNREC throughout the planning process. The Shoreline and Waterways Management Section (SWMS) of DNREC will coordinate the linkage between refuge land and private land dune reconstruction, and coordinate with private landowners involved in the project.

Concurrently, the Service will initiate or continue monitoring or investigative studies, in conjunction with State, Federal, and academic partners, to improve our understanding of the local system. Current and proposed scientific monitoring and studies include investigations regarding marsh elevation changes, real-time monitoring of water levels and salinity, monitoring of water quality and suspended sediment concentration, characterization of the beach profile and coastline position, and behavioral use and food availability for dabbling ducks during wintering and migration periods in impoundments and adjacent tidal wetlands. We are working to expand this research to include other waterbird groups, such as shorebirds.

It may take several years to collect and analyze enough data to develop sufficient understanding of the system to fully refine future management plans. This comprehensive monitoring program will enable the refuge to further define management needs in response to the changing environment, to evaluate management approaches, and revise or adapt restoration actions in light of the system response.

Alternative 3: Dune line reconstruction using material from off-site sources.

The same dune line repairs and filling of existing inlets proposed in the Preferred Alternative would occur; however, no sand would be scraped from refuge lands to complete the work. All materials needed to complete work on refuge lands would be hauled from off-site sources. Additionally, no materials existing on refuge lands would be scraped to reconstruct dunes and fill inlets on private lands. As in the Preferred Alternative, the Service would work closely with our partners at DNREC, along with neighboring private landowners.

The draft EA was released for a 30-day-long public review and comment period, which ended on August 26, 2010. After consideration of all public comments and our responses to them, we determined that this EA was sufficient to support our findings. The following changes were incorporated into the final EA:

1. We incorporated elements of Alternative 3 into our Preferred Alternative (Alternative 2), which would permit the State of Delaware access across refuge lands with trucks and equipment to import sand from outside sources and place it on private lands if the State determines that option to be appropriate and fundable.
2. We clarified that the alignment of the dune/berm to be created will be as far landward (west) as possible, remaining on refuge land as much as is feasible.

3. Additional details were added about the history of the wetlands surrounding the project area, including the addition of historic maps.
4. We clarified that the primary purpose of the action is to maintain current habitats in as stable a condition as possible to prevent disintegration of the marsh substrate and peat while technical information is generated and long-term restoration actions are developed so as, to the extent feasible, avoid the conversion of the marshes to open water and to preserve the Service's ecological management options while long-term management goals are being developed through the pending comprehensive conservation planning process and a long-term habitat restoration/management plan is developed.
5. Specifications of the dune/berm to be constructed and estimated costs were modified following additional consultation with the State of Delaware.
6. We provided additional detail about the monitoring and data collection to be conducted throughout the wetland complex on the refuge.
7. The option to dredge sand from off-shore and pump it onto the beach was acknowledged as an alternative considered but not studied in detail.
8. Some additional impacts of the considered alternatives on sediments/soil, vegetation, and wildlife were incorporated.
9. A summary of public comments and our responses to the comments have been added.

The Preferred Alternative, as described in the final EA, was selected over the other alternatives because:

1. The Preferred Alternative is consistent with Service policy regarding management actions on national wildlife refuges.
2. The Preferred Alternative restores at least some of the management capability the refuge has utilized over the past two decades to manage a freshwater or brackish marsh for migratory waterfowl.
3. We are concerned that inaction in the short term may inadvertently increase the amount of open water in the impoundments and thus increase the challenges inherent in restoring the system's integrity without the opportunity for a strategic management or restoration plan to be developed and implemented. Collection of additional data about the wetland system in its current state is vital for effective long-term planning.
4. The Preferred Alternative provides a reasonable option for meeting the objective of reducing impacts of coastal flooding and reducing erosion for the short term while a long-term restoration and management plan, based upon increased availability of scientific information, is developed.
5. This action does not conflict with local, State, regional, or Federal plans or policies.

Therefore, it is our determination that the Preferred Alternative with the above-mentioned changes does not constitute a major Federal action significantly affecting the quality of the human environment under the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969 (as amended). As such, an Environmental Impact Statement is not required and this Finding of No Significant Impact is appropriate and warranted.

This determination is based on the following factors:

1. Both beneficial and adverse effects have been considered and this action will not have a significant effect on the human environment.
2. The proposal will not significantly affect any unique characteristics of the geographic area such as proximity to historical or cultural resources or ecologically critical areas.
3. There will be no significant cumulative impacts on the environment. Cumulative impacts have been analyzed with consideration of other similar activities on adjacent lands, in past actions, and in future foreseeable actions.
4. The action will not adversely affect endangered or threatened species, or their habitats.
5. We have coordinated this action with the State natural resources agencies and there are no conflicts with State regulations.

11-5-10

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Date